

VIDEO CAPTURE DEVICE AND METHOD OF SENDING HIGH QUALITY
VIDEO OVER A LOW DATA RATE LINK

Abstract of the Disclosure

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10 A video reception device, such as personal computer, generates high quality
video from video data received from a video capture device over a low data rate
communication interface such as a USB interface. The video data is received by the
reception device in two passes. The first pass provides a low frequency portion of
coefficients and the second pass provides a high frequency portion of coefficients.
The coefficients representing the video are generated by performing a Discrete
Cosine Transform (DCT) on blocks of pixels and compressing a portion of the
coefficients. In one embodiment, the video reception device matches a frame received
during the first pass with a frame received during the second pass and signals the
15 video capture device to switch from compressing the low frequency portion of
coefficients to compressing the high frequency portion. In an alternate embodiment,
frames received in the first and second passes are stored at the reception device and a
key frame may be used to synchronize the frames received from each pass.

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